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**FIRST FIVE-YEAR REVIEW REPORT FOR
JACOBSVILLE NEIGHBORHOOD SOIL CONTAMINATION SUPERFUND SITE
VANDERBURGH COUNTY, INDIANA**



Prepared by

**U.S. Environmental Protection Agency
Region 5
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A handwritten signature in black ink, appearing to read "Margaret M. Guerriero".

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3/30/2017

Date

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LIST OF ABBREVIATIONS & ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
EPA	United States Environmental Protection Agency
FYR	Five-Year Review
ICIAP	Institutional Control Implementation and Assurance Plan
ICs	Institutional Controls
IDEM	Indiana Department of Environmental Management
LTS	Long-Term Stewardship
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
OU	Operable Unit
ppm	parts per million
RA	Remedial Action
RAO	Remedial Action Objectives
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
ROD	Record of Decision
RPM	Remedial Project Manager
OU	Operable Unit
TBC	To be considered
UU/UE	Unlimited Use and Unrestricted Exposure

I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The United States Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP)(40 CFR Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the first FYR for the Jacobsville Neighborhood Soil Contamination (Jacobsville) Superfund Site. The triggering action for this **statutory** review is the on-site construction start date of the Operable Unit (OU) 2 remedial action. The FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants will likely remain at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of two OUs, and both OUs will be addressed in this FYR. OU1 encompasses 141 acres of residential properties in the Jacobsville Neighborhood of Evansville and in general had higher levels of arsenic and lead contamination in the residential soils, at depths up to two feet. OU2 encompasses approximately 4.5 square miles surrounding OU1, with arsenic and lead contamination in residential soils at depths up to 18 inches.

The Jacobsville Superfund Site FYR was led by Jena Sleboda Braun of EPA. Participants included Annie Hause, Project Manager for the Indiana Department of Environmental Management (IDEM), and Rik Lantz, Project Manager and Andy Suminski, Field Project Manager for SulTRAC, the EPA Remedial Action Contractor for the cleanup work at the site. The review began on 11/2/2015.

Site Background

The Jacobsville Neighborhood Soil Contamination (Jacobsville) site is located in Evansville, Vanderburgh County, Indiana. The site consists of residential and high access property (e.g. parks and daycare facilities) soils contaminated by lead and arsenic. The site was named the Jacobsville Neighborhood Soil Contamination site because the contamination was initially found in the Jacobsville neighborhood of Evansville; however, after further investigations, EPA found that contamination extended to other areas of Evansville. The site is divided into two OUs. OU 1 is roughly bounded by the Lloyd Expressway (State Highway 62) to the south, Mary Street to the west, Iowa Street to the north, and Elliot Street to the east, and was addressed in the Record of Decision (ROD) published in February 2008. OU 1 encompasses 141 acres of residential properties in the Jacobsville neighborhood of Evansville and is shown in Figure 1 in Appendix D. OU 2 extends outward from OU 1 and covers approximately 4.5 square miles (see Figure 1 in Appendix D), and was addressed in the ROD published in September 2009.

IDEM identified four former facilities that likely contributed to the contamination at the site: Blount Plow Works, (operated from the 1880s to about the 1940s), Advance Stove Works (operated from approximately the 1900s to the 1950s), Newton-Kelsay (operated from approximately the 1900s to the 1950s), and Sharpes Shot Works (operated from 1878 to an unknown date) (Figure 1, Appendix D). The

facilities were located within the boundaries of OU1. These facilities are no longer operating and have all been demolished and, in some cases, built over. In addition to the four facilities described above, Evansville Plating Works (EPW) also may have contributed to the contamination. The company, which began operations in 1897, plated zinc, brass, nickel, copper, iron black (iron oxide), cadmium, and chromium for individuals and industry. Evansville Plating Works is located at 100 West Indiana Street, just south of the Jacobsville Neighborhood. The 1-acre site formerly was occupied by a large, dilapidated, one-story building. The building was demolished, and the lot is now empty. Land use surrounding the site is predominantly residential with small and light industrial businesses nearby.

EPA is the lead agency for this site, and IDEM is the support agency. Site remediation is financed by EPA with a 10 percent share financed by the State of Indiana.

For purposes of the human health and ecological risk assessments for this site, current and reasonably anticipated future land uses were identified. Residential properties within the Jacobsville Neighborhood Soil Contamination site boundaries are being remediated as explained in the RODs. There is no indication that the residential properties in OU1 or OU2 will be rezoned. If there are properties that are rezoned to residential at any time during the remedial action they will be addressed in the OU2 remedial action. Therefore, it was and is assumed that the future land use at the properties within the site boundaries will be residential use.

More information on the site characteristics, including the human health and ecological risk assessments, can be found in the Remedial Investigation Report (*CH2M Hill 2006*) and the Feasibility Study Report (*CH2M Hill 2007*).

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Jacobsville Neighborhood Soil Contamination		
EPA ID: INN 000 508 142		
Region: 5	State: IN	City/County: Evansville, Vanderburgh County
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	Has the site achieved construction completion? No	
REVIEW STATUS		
Lead agency: EPA <i>[If "Other Federal Agency", enter Agency name]:</i>		
Author name (Federal or State Project Manager): Jena Sleboda Braun		
Author affiliation: EPA		
Review period: 11/2/2015 - 4/5/2017		

Date of site inspection: 6/30/2016
Type of review: Statutory
Review number: 1
Triggering action date: 4/5/2012
Due date <i>(five years after triggering action date)</i> : 4/5/2017

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

- Lead and arsenic contamination in surficial soils at concentrations above human health screening levels were found at residential properties nearby and adjacent to the Evansville Plating Works Superfund Removal site during confirmation sampling that took place after the removal action was completed.
- Site-wide, arsenic and lead in surface soils were identified as chemicals of concern for human health exposures. Ingestion, dermal contact, and inhalation of the lead and arsenic from soils are complete exposure pathways to child and adult residents and industrial workers at the site.

Response Actions

- **EPA Evansville Plating Works Removal Action**
EPA initiated a removal action at the Evansville Plating Works facility on July 2, 1990. During the removal action, liquid and solid waste streams were characterized and transported off site for treatment and/or disposal. About 18,245 gallons of hazardous liquid waste streams were transported off site for treatment and disposal and 22,391 cubic yards of hazardous debris was shipped off site to a disposal facility. The removal action was completed on January 12, 1993. On-site sampling was done to verify that all hazardous materials had been removed. In July of 2000, IDEM took off-site samples to verify that the Evansville Plating Works facility had not contributed to contamination outside of the property. It was at this time that high levels of lead were found at the site and in nearby residential soils. A second removal action was conducted in September and October of 2003 that addressed the demolition of the building and removal of contamination and debris from the site. This removal action cleaned the property to industrial standards, which is consistent with the past and current zoning of the property. This is not considered part of the Jacobsville site, but sampling at the site is what led to the discovery of the elevated lead levels in residential soils in the area, and that data was used in listing the Jacobsville site on the National Priorities List.
- **EPA Jacobsville Neighborhood Soil Contamination Removal Action**
On September 17, 2007, EPA initiated a removal action at residential properties at the Jacobsville site where lead concentrations in the soils exceeded 1200 parts per million (ppm).

During the removal action, properties in areas where previous sampling had found lead levels of 1200 ppm or greater were sampled for lead. Eighty-three homes were addressed in the removal action, which was completed in early 2008. All properties addressed in the removal action were backfilled with soil with lead and arsenic concentrations below the remedial cleanup levels. Therefore, these properties allow for unlimited use and unrestricted exposure (UU/UE).

Remedy Selection

Operable Unit 1

EPA signed a ROD to select a remedial action to address site risks at OU1 of the Jacobsville Site on February 14, 2008. The remedy addressed the risks posed by the lead and arsenic contaminated soils at residential and high access properties in the OU1 area, which is the area immediately surrounding the suspected contamination sources. The Remedial Action Objective (RAO) for OU1 is to control concentrations of arsenic and lead in residential soil that present a human health risk by minimizing the potential for dermal contact, ingestion, and inhalation exposures.

The remedy components selected in the OU1 ROD are as follow:

- Residential yards containing concentrations greater than the arsenic and/or lead cleanup levels will have the soils excavated to the depth that the elevated concentrations were found, up to two feet. If physical barriers exist, such as large trees, soil will be excavated around the barrier to the extent possible. Engineering controls will be implemented in order to prevent exposure to lead and arsenic from dust created by the excavation of the soils. Building foundations, permanent walkways and fixtures will not be affected by the soil excavation.
- Once excavation is complete and verified by confirmation sampling, clean fill will be placed in the excavated areas and the lawns will be returned to as close to their original condition as possible.
- Excavated soils will be transported to a Resource Conservation and Recovery Act (RCRA) Subtitle D landfill. This remedy assumes that the excavated soil will not be characterized as hazardous waste.

The cleanup levels selected for OU1 are 400 ppm for lead and 30 ppm for arsenic, which allow for UU/UE.

Operable Unit 2

EPA signed a ROD to select a remedial action to address site risks at OU2 of the Jacobsville Site on September 22, 2009. The remedy addressed the risks posed by the lead and arsenic contaminated soils at residential and high access properties in the OU2 area, which encompasses OU1 and approximately 4.5 square miles of the City of Evansville. The RAO for OU2, as for OU1, is to control concentrations of arsenic and lead in residential soil that present a human health risk by minimizing the potential for dermal contact, ingestion, and inhalation exposures.

The remedy components selected in the OU2 ROD are as follows:

- Residential yards containing lead and/or arsenic at concentrations greater than the cleanup levels will have the soils excavated to the depth that the elevated concentrations are found, up to 18 inches. If physical barriers exist, such as large trees, soil will be excavated around the barrier to the extent possible. Engineering controls will be implemented in order to prevent exposure to lead and arsenic from dust created by the excavation of the soils. Building foundations, permanent walkways and fixtures will not be affected by the soil excavation.
- Once excavation is complete, clean fill will be placed in the excavated areas, and the lawns will be returned to as close to their original condition as possible.
- Excavated soils will be transported to a RCRA Subtitle D landfill. This remedy assumes that the excavated soil will not be characterized as hazardous waste. This was confirmed by toxicity characteristic leaching procedure analyses performed on soils during the remedial design (RD) for OU1, where the more highly contaminated soils were expected. If possible, soil will be put to reuse, such as at industrial sites or as daily cover at a landfill. Whenever possible, cleanup priority will be given to those residents at higher risk, such as homes with children under 7 years of age. In addition, EPA will work with residents with special needs to ensure the cleanup can proceed without adversely affecting them.

The cleanup levels selected for OU2 are 400 ppm for lead and 30 ppm for arsenic, which allow for UU/UE at remediated properties.

Status of Implementation

Operable Unit 1

The characterization sampling and RD were implemented by EPA and conducted by CH2M Hill. In brief, the RD included soil sampling at each identified property to assess the presence and depth of contamination and preparation of a design drawing for each individual property. Sample locations were selected using the Superfund Lead-Contaminated Residential Site Handbook (EPA 2003) as the guidance document. Generally, 5-point composite samples were collected in the front and back yards within a 5,000-square-foot lot. Side yards and drip zones were also sampled when necessary. Lots larger than 5,000 square feet were divided into four quadrants, with a 5-point composite sample being collected from each quadrant. Laboratory analytical data were then used to assess arsenic- and lead-impacted zones at each property. Samples were collected at depths of 0 to 6 inches below ground surface (bgs), 6 to 12 inches bgs, 12 to 18 inches bgs, and 18 to 24 inches bgs. Based on results from the characterization sampling, an RD drawing was produced for each property requiring remedial action (RA) in OU1. The RD drawings contain specific excavation depths, and other site features including small bushes and trees (tree trunks more than 4 inches in diameter) existing on the property. EPA then submitted the RD drawings to SulTRAC for implementation of the RA.

Remedial action of OU1 began in 2009 and was completed in 2013. EPA retained SulTRAC to perform remedial activity at the Jacobsville OU1 Site. The implementation of the RA at 263 properties began in April 2010.

The project phases associated with this part of the work were Phases 1, 2 and 3. On June 16, 2011, EPA assigned an additional 22 properties designated as Phase 3S. Of the 283 properties identified, 263 properties were remediated from April to November 2010. Remedial activities were successfully performed on 20 of the Phase 3S properties during November 2011. A total of 283 properties were therefore remediated as part of the Jacobsville OU1 Phases 1, 2, 3, and 3S between April 2010 and November 2011. All the remediated properties were located within the Jacobsville OU1 boundary. The specified remedy included removing the top layer of soil contaminated with lead greater than 400 ppm and/or arsenic greater than 30 ppm to a maximum of 24 inches bgs, replacing the excavated soil with clean backfill, and restoring the property to pre-construction condition, in accordance with the Jacobsville OU1 ROD (EPA 2008).

A total of 508 residential properties are currently estimated to be present in OU1. The exact number of properties is difficult to define because over time, many individual lots are combined to form single properties or have been rezoned to commercial use. The Removal Action addressed 83 residential properties in OU1 and the Remedial Action addressed an additional 283 properties during OU1 Phase 1 through 3S. Seventy-five properties in OU1 were sampled and found not to require remediation. Remaining residential properties in OU1 fall into several categories, including properties where conditions changed between the design and remediation phases of the project, properties where the owner denied access, properties where the owner was unresponsive, and properties in tax receivership. EPA will revisit these properties periodically during the OU2 Remedial Action to determine if circumstances have changed that allow EPA to complete the RA under OU2.

Operable Unit 2

The RA for OU2 began in 2011 and is ongoing. Like the RD for OU1, the characterization sampling and RD for OU2 are being implemented by EPA and conducted by CH2M Hill. The RD process is the same as for OU1. Remedial Designs are being managed in sets of approximately 250 properties, which are then remediated in the RA process conducted by SulTRAC with oversight from EPA. The RD and RA for OU2 are ongoing, with approximately 1,500 properties remediated in OU2 at the time of the writing of this FYR. The OU2 ROD estimated that 4,000 properties would require remediation in OU2.

Institutional Controls

Institutional Controls (ICs) are non-engineered instruments, such as administrative and legal controls that help to minimize the potential for exposure to contamination and that protect the integrity of the remedy. ICs are required to assure the long-term protectiveness for any areas which do not allow for UU/UE. A summary of the implemented and planned ICs for the Site is listed in Table 1 and are further discussed below.

ICs were not included in the OU1 ROD because, due to the limited number of properties, it was expected that all properties that need remediation within OU1 could be addressed. Due to the large number of properties expected to be remediated in OU2, it was not expected that all properties that needed to be sampled or needed remediation would grant EPA access to do so. Therefore, ICs were included in the OU2 remedy. Although no ICs are required for the remediated properties, EPA and IDEM agreed to provide a "clean letter" to the landowner and to file a notarized copy with the County Recorder. This measure would allow potential buyers and those with a valid need for the information to be able to access a public record of the individual property of interest to determine that the property has been remediated.

As mentioned, ICs are required per the OU2 ROD. The ROD stated that ICs are anticipated for those properties which are contaminated but for which access is not obtained for cleanup. The type of IC anticipated is a lead hazard registry that lists the remediation status for every property. However, upon reconsiderations by EPA and IDEM, several concerns have arisen regarding the anticipated type of IC envisioned in the ROD. First, due to the concern regarding publicly identifiable information, a public registry of all properties remediated will not be available. It has been determined at similar residential cleanup sites that a lead hazard registry identifying properties that have not been remediated or sampled is appropriate, and this type of registry can be implemented with the local government. However, a registry is considered an information IC and those types of ICs are not enforceable and do not run with the land. Hence, for properties where waste is left in place or potentially left in place (unremediated or unsampled properties), EPA and IDEM will revisit the anticipated type of ICs. For example, deed notices or deed restrictions for those properties may be appropriate. EPA will ensure that the ROD is amended or clarified once the type of ICs is selected. Furthermore, EPA is and will continue to attempt to gain access to properties that have refused access or could not be remediated for other reasons, until the project is complete and no further remediation will occur. At that point the IC registry will be implemented. Any properties within the OU1 boundary and not remediated will also be included in this IC.

Table 1: Summary of Planned and/or Implemented ICs

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Soil	Yes	Yes	Parcels not remediated	Publicly accessible record noting contamination present or possibly present at properties not sampled or remediated.	Registry (planned) Under evaluation
Soil	No	No	Parcels remediated		Notarized clean letter Although ICs are not necessary, the clean letters will give the homeowners useful information; Documentation that cleanup work has been completed at the property. This information is attached to the deed at the County Records office. Ongoing

A map that depicts the current conditions of the Site, areas remediated, and areas that were not sampled or remediated is currently being maintained, and a publicly releasable version will be developed in the IC follow up actions discussed below.

IC Follow up Actions Needed: EPA will develop an Institutional Control Implementation and Assurance Plan (ICIAP) or equivalent document. The purpose of the ICIAP is to conduct additional IC evaluation activities to ensure that effective ICs are implemented, to explore whether additional ICs are needed, and to ensure that long-term stewardship (LTS) procedures are in place so that ICs are properly maintained, monitored, and enforced.

IC evaluation activities will include, as needed, updated maps depicting current conditions in areas that do not allow for UU/UE, identification of appropriate ICs for unremediated properties, and review of recording and title work to ensure the restrictions are still recorded, and that no prior-in-time encumbrances exist on the Site that are inconsistent with the ICs.

At the close of the project, a registry of all properties where access for sampling or remediation was denied or remediation was not performed for other reasons may be developed. This is being considered along with consideration of implementation of additional ICs which may also be needed to ensure long-term protectiveness.

During the Five-Year Review process, the ICs will be reviewed to determine if the remedy is protective in the long-term. For example, the registry should be reviewed and updated, and determined if the registry is adequately maintained and accessible.

III. PROGRESS SINCE THE LAST REVIEW

This is the first FYR for the Jacobsville Site.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was made available by advertisements in the Evansville Courier and Press newspaper, on January 17 and February 7, 2016, stating that there was a FYR and inviting the public to submit any comments to EPA. The results of the review and the report will be made available at the Site information repository located at the Evansville Vanderburgh Public Library 840 East Chandler Avenue in Evansville, or at www.epa.gov/superfund/jacobsville-neighborhood-soil.

During the FYR process, no formal interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date. However, because the remedial action is currently ongoing, there is ongoing communication between the EPA, its contractors, local government officials, and community members in the current cleanup area. The EPA Remedial Project Manager (RPM) is at the site on a monthly basis, and EPA contractors have a constant presence at the site while remediation is occurring. EPA and its contractors work with each property owner on a case by case basis, and address concerns as they arise. The EPA contractor also requests feedback from property owners once the property remediation is complete. At the time of this FYR, the feedback received suggests an overwhelming majority (over 95%) of property owners are very satisfied with the results of the remediation.

Data Review

EPA reviewed the site data contained in the Final Remedial Action Report: Operable Unit 1, Phase 1 through Phase 3S (2013); Final Remedial Action Report Addendum: Operable Unit 1, Project 5 (2016); and Final Remedial Action Report: Operable Unit 2, Project 2 (2017). The reports show that properties that were cleaned up met the 400 ppm lead cleanup goal and the 30 ppm arsenic cleanup goal, based on backfill sampling data.

Site Inspection

The inspection of the Site was conducted on August 15, 2016. In attendance were Jena Sleboda Braun, RPM for EPA, Annie Hause of IDEM, and Rik Lantz and Andy Suminski of SulTrac, EPA's contractors. The purpose of the inspection was to assess the protectiveness of the remedy.

During the site inspection, on-site records, including the Health and Safety Plan and employee Health and Safety certifications, were reviewed. No deficiencies were noted. The site inspection also included observation of four properties that were in the process of being remediated, and inspection of several properties that were recently remediated and restored. All work was being performed in accordance with the ROD and RD documents.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Question A Summary:

Yes.

At OU1, all properties have been addressed in the remedial action, and the selected remedy is functioning as intended in the ROD by eliminating the exposure pathway to lead and/or arsenic at residential and high access properties. Cleanup levels have been achieved at all properties where a remedial action has been performed. The ongoing practice of recording "clean letters" with the property deed at the County Recorder's office is also providing a paper record for those buying and selling properties within OU1.

At OU2, the cleanup is ongoing and therefore not all properties have been addressed. At properties that have had remediation, the remedy is functioning as intended in the ROD by eliminating the exposure pathway to lead and/or arsenic at residential and high access properties. Cleanup levels have been achieved at all properties where a remedial action has been performed. The ongoing practice of recording "clean letters" with the property deed at the County Recorder's office is also providing a paper record for those buying and selling properties within OU2. At properties that have not yet been remediated, a complete exposure pathway exists and there are potential or actual exposures occurring at those properties. EPA has held information sessions and mailed out flyers on how to minimize contact with the contaminated soils.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

Question B Summary:

Yes.

There have been no changes in either the contaminant characteristics or toxicity standards for protection of soil as they relate to lead and arsenic at the site. The RAO to control concentrations of arsenic and lead in residential soil that present a human health risk by minimizing the potential for dermal contact, ingestion, and inhalation exposures is still appropriate for the site. Potential exposure scenarios remain the same.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

No.

No new information has come to light in the last five years that would call into question the protectiveness of the selected remedies for the Jacobsville site. The Applicable or Relevant and Appropriate Requirements (ARARs) have been reviewed and remain unchanged (see Appendix 4). There have been no changes in the physical conditions that would affect the protectiveness of the remedy. There have been no newly discovered ecological risks. There have been no significant impacts from natural disasters.

VI. ISSUES/RECOMMENDATIONS

Issues and Recommendations Identified in the Five-Year Review:

OU(s): 2	Issue Category: Other <i>Note: Access for remediation denied</i>			
	Issue: Property owners granted access for sampling, but denied access for remediation.			
	Recommendation: Continue to monitor these properties for ownership change or other changing circumstances that will allow for remediation access.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	EPA	EPA/State	10/31/2022

OU(s): 2	Issue Category: Other <i>Note: Access for sampling denied</i>			
	Issue: Property owners have denied access for sampling, presence of contamination is unknown.			
	Recommendation: Continue to monitor these properties for ownership change or other changing circumstances that will allow for sampling access.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	EPA	EPA/State	10/31/2022

OU(s): 2	Issue Category: Other <i>Note: Unable to find or contact property owner</i>			
	Issue: Unable to find or contact property owners, presence of contamination is unknown.			
	Recommendation: Continue to monitor these properties for ownership change or other changing circumstances that will allow for sampling access.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	EPA	EPA/State	10/31/2022

OU(s): 2	Issue Category: Institutional Controls			
	Issue: Documents and procedures should be developed and implemented to ensure that effective ICs are implemented and properly maintained, monitored, and enforced.			
	Recommendation: Develop an ICIAP.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	EPA	EPA/State	10/31/2022

OU(s): 2	Issue Category: Institutional Controls			
	Issue: ICs are needed for unremediated properties.			
	Recommendation: Implement ICs.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	EPA	EPA/State	10/31/2022

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)	
<i>Operable Unit:</i> 1	<i>Protectiveness Determination:</i> Protective
Protectiveness Statement: The remedy at OU1 is protective of human health and the environment. The exposure pathway to lead and/or arsenic at residential and high access properties has been eliminated. Cleanup levels have been achieved at all properties where a remedial action has been performed. The ongoing practice of recording "clean letters" with the property deed at the County Recorder's office is also providing a paper record for those buying and selling properties within OU1.	
<i>Operable Unit:</i> 2	<i>Protectiveness Determination:</i> Will be Protective
Protectiveness Statement: The remedy at OU2 is expected to be protective of human health and the environment upon completion of the remedial action. In the interim, remedial activities completed to date have adequately addressed all exposure pathways that could result in unacceptable risks in these areas.	

VIII. NEXT REVIEW

The next FYR report for the Jacobsville Neighborhood Soil Contamination Superfund Site is required no less than five years from EPA's signature date of this review.

Appendix A: Reference List

CH2M Hill. 2006, *Final Remedial Investigation Report, Jacobsville Neighborhood Soil Contamination Site, Evansville, Indiana, Remedial Investigation/Feasibility Study* September 2006.

CH2M Hill. 2007, *Final Feasibility Study Report, Jacobsville Neighborhood Soil Contamination Site, Evansville, Indiana, Remedial Investigation/Feasibility Study* January 2007.

SulTRAC. 2013, *Final Remedial Action Report (OUI) – Phase 1 Through Phase 3S* September 2013.

SulTRAC. 2015, *Final Remedial Action Report – Operable Unit 2, Project 1* July 2015.

SulTRAC. 2016, *Final Remedial Action Report Addendum – Operable Unit 1, Project 5.* May 2016.

U.S. EPA. 2003, *Superfund Lead-Contaminated Residential Site Handbook*. OSWER 9285.7-50. August 2003.

U.S. EPA. 2008, *Jacobsville Neighborhood Soil Contamination Site, Evansville, Vanderburgh County, Indiana, Record of Decision – Operable Unit 1.* February 2008.

U.S. EPA, 2009, *Jacobsville Neighborhood Soil Contamination Site, Evansville, Vanderburgh County, Indiana, Record of Decision – Operable Unit 2.* September 2009.

Appendix B: Site Chronology

Chronology of Site Events

Event	Date
Evansville Plating Removal Action	1990-1993, 2003
IDEM post-removal sampling for Evansville Plating Removal Action	July 2000
Site proposed on the National Priorities List (NPL)	March 8, 2004
Site listed on the NPL	July 22, 2004
Remedial Investigation/Feasibility Study (RI/FS)	2004-2008
Removal Action	2007-2008
Record of Decision (ROD) OU1	February 14, 2008
ROD OU2	September 22, 2009
Remedial Design (RD) OU1	2008-2010
Remedial Action (RA) OU1	2009-2013
RD OU2	2010-ongoing
RA OU2	2011-ongoing

Appendix C

Appendix D

Five-Year Review Site Inspection Checklist

Purpose of the Checklist

The site inspection checklist provides a useful method for collecting important information during the site inspection portion of the five-year review. The checklist serves as a reminder of what information should be gathered and provides the means of checking off information obtained and reviewed, or information not available or applicable. The checklist is divided into sections as follows:

- I. Site Information
- II. Interviews
- III. On-site Documents & Records Verified
- IV. O&M Costs
- V. Access and Institutional Controls
- VI. General Site Conditions
- VII. Landfill Covers
- VIII. Vertical Barrier Walls
- IX. Groundwater/Surface Water Remedies
- X. Other Remedies
- XI. Overall Observations

Some data and information identified in the checklist may or may not be available at the site depending on how the site is managed. Sampling results, costs, and maintenance reports may be kept on site or may be kept in the offices of the contractor or at State offices. In cases where the information is not kept at the site, the item should not be checked as "not applicable," but rather it should be obtained from the office or agency where it is maintained. If this is known in advance, it may be possible to obtain the information before the site inspection.

This checklist was developed by EPA and the U.S. Army Corps of Engineers (USACE). It focuses on the two most common types of remedies that are subject to five-year reviews: landfill covers, and groundwater pump and treat remedies. Sections of the checklist are also provided for some other remedies. The sections on general site conditions would be applicable to a wider variety of remedies. The checklist should be modified to suit your needs when inspecting other types of remedies, as appropriate.

The checklist may be completed and attached to the Five-Year Review report to document site status. Please note that the checklist is not meant to be completely definitive or restrictive, additional information may be supplemented if the reviewer deems necessary. Also note that actual site conditions should be documented with photographs whenever possible.

Using the Checklist for Types of Remedies

The checklist has sections designed to capture information concerning the main types of remedies which are found at sites requiring five-year reviews. These remedies are landfill covers (Section VII of the checklist) and groundwater and surface water remedies (Section IX of the checklist). The primary elements and appurtenances for these remedies are listed in sections which can be checked off as the facility is inspected. The opportunity is also provided to note site conditions, write comments on the facilities, and attach any additional pertinent information. If a site includes remedies beyond these, such as soil vapor extraction or soil landfarming, the information should be gathered in a similar manner and attached to the checklist.

Considering Operation and Maintenance Costs

Unexpectedly widely varying or unexpectedly high O&M costs may be early indicators of remedy problems. For this reason, it is important to obtain a record of the original O&M cost estimate and of annual O&M costs during the years for which costs incurred are available. Section IV of the checklist provides a place for documenting annual costs and for commenting on unanticipated or unusually high O&M costs. A more detailed categorization of costs may be attached to the checklist if available. Examples of categories of O&M costs are listed below.

Operating Labor - This includes all wages, salaries, training, overhead, and fringe benefits associated with the labor needed for operation of the facilities and equipment associated with the remedial actions.

Maintenance Equipment and Materials - This includes the costs for equipment, parts, and other materials required to perform routine maintenance of facilities and equipment associated with a remedial action.

Maintenance Labor - This includes the costs for labor required to perform routine maintenance of facilities and for equipment associated with a remedial action.

Auxiliary Materials and Energy - This includes items such as chemicals and utilities which can include electricity, telephone, natural gas, water, and fuel. Auxiliary materials include other expendable materials such as chemicals used during plant operations.

Purchased Services - This includes items such as sampling costs, laboratory fees, and other professional services for which the need can be predicted.

Administrative Costs - This includes all costs associated with administration of O&M not included under other categories, such as labor overhead.

Insurance, Taxes and Licenses - This includes items such as liability and sudden and accidental insurance, real estate taxes on purchased land or right-of-way, licensing fees for certain technologies, and permit renewal and reporting costs

Other Costs - This includes all other items which do not fit into any of the above categories.

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Please note that "O&M" is referred to throughout this checklist. At sites where Long-Term Response Actions are in progress, O&M activities may be referred to as "system operations" since these sites are not considered to be in the O&M phase while being remediated under the Superfund program.

Five-Year Review Site Inspection Checklist (Template)

(Working document for site inspection. Information may be completed by hand and attached to the Five-Year Review report as supporting documentation of site status. "N/A" refers to "not applicable.")

I. SITE INFORMATION															
Site name: <u>Jacobsville Soil</u>		Date of inspection: <u>8/15/16</u>													
Location and Region: <u>Evansville, IN RS</u>		EPA ID:													
Agency, office, or company leading the five-year review: <u>EPA RS</u>		Weather/temperature: <u>75°, Sunny</u>													
Remedy Includes (Check all that apply) <table border="0" style="width: 100%;"> <tr> <td><input type="checkbox"/> Landfill cover/containment</td> <td><input type="checkbox"/> Monitored natural attenuation</td> </tr> <tr> <td><input type="checkbox"/> Access controls</td> <td><input type="checkbox"/> Groundwater containment</td> </tr> <tr> <td><input type="checkbox"/> Institutional controls</td> <td><input type="checkbox"/> Vertical barrier walls</td> </tr> <tr> <td><input type="checkbox"/> Groundwater pump and treatment</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Surface water collection and treatment</td> <td></td> </tr> <tr> <td colspan="2"><input checked="" type="checkbox"/> Other <u>Soil contamination removal + disposal (residential and high access properties)</u></td> </tr> </table>				<input type="checkbox"/> Landfill cover/containment	<input type="checkbox"/> Monitored natural attenuation	<input type="checkbox"/> Access controls	<input type="checkbox"/> Groundwater containment	<input type="checkbox"/> Institutional controls	<input type="checkbox"/> Vertical barrier walls	<input type="checkbox"/> Groundwater pump and treatment		<input type="checkbox"/> Surface water collection and treatment		<input checked="" type="checkbox"/> Other <u>Soil contamination removal + disposal (residential and high access properties)</u>	
<input type="checkbox"/> Landfill cover/containment	<input type="checkbox"/> Monitored natural attenuation														
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<input type="checkbox"/> Groundwater pump and treatment															
<input type="checkbox"/> Surface water collection and treatment															
<input checked="" type="checkbox"/> Other <u>Soil contamination removal + disposal (residential and high access properties)</u>															
Attachments: <input type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached															
II. INTERVIEWS (Check all that apply) <u>none</u>															
1	O&M site manager <u>N/A</u>	Name	Title												
		Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone	Phone no												
		Problems, suggestions; <input type="checkbox"/> Report attached													

2	O&M staff <u>n/a</u>
	<div style="display: flex; justify-content: space-between;"> Name _____ Title _____ Date _____ </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____ </div> <div style="margin-top: 5px;"> Problems, suggestions, <input type="checkbox"/> Report attached _____ </div>
3	Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply
	<div style="margin-bottom: 10px;"> Agency _____ Contact _____ </div> <div style="display: flex; justify-content: space-between;"> Name _____ Title _____ Date _____ Phone no. _____ </div> <div style="margin-top: 5px;"> Problems; suggestions; <input type="checkbox"/> Report attached _____ </div>
	<div style="margin-bottom: 10px;"> Agency _____ Contact _____ </div> <div style="display: flex; justify-content: space-between;"> Name _____ Title _____ Date _____ Phone no. _____ </div> <div style="margin-top: 5px;"> Problems; suggestions; <input type="checkbox"/> Report attached _____ </div>
	<div style="margin-bottom: 10px;"> Agency _____ Contact _____ </div> <div style="display: flex; justify-content: space-between;"> Name _____ Title _____ Date _____ Phone no. _____ </div> <div style="margin-top: 5px;"> Problems; suggestions; <input type="checkbox"/> Report attached _____ </div>
	<div style="margin-bottom: 10px;"> Agency _____ Contact _____ </div> <div style="display: flex; justify-content: space-between;"> Name _____ Title _____ Date _____ Phone no. _____ </div> <div style="margin-top: 5px;"> Problems; suggestions; <input type="checkbox"/> Report attached _____ </div>
4.	Other interviews (optional) <input checked="" type="checkbox"/> Report attached
	<u>Pat Lantz, Sultrac</u>
	<u>Andy Suminski, Sultrac</u>

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)				
1	O&M Documents <input type="checkbox"/> O&M manual <input type="checkbox"/> As-built drawings <input type="checkbox"/> Maintenance logs Remarks _____	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A
2	Site-Specific Health and Safety Plan <input checked="" type="checkbox"/> Contingency plan/emergency response plan Remarks <u>At Sultrac office</u>	<input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date <input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A <input type="checkbox"/> N/A
3	O&M and OSHA Training Records Remarks <u>on computers, Sultrac office</u>	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
4	Permits and Service Agreements <input type="checkbox"/> Air discharge permit <input type="checkbox"/> Effluent discharge <input type="checkbox"/> Waste disposal, POTW <input checked="" type="checkbox"/> Other permits Remarks <u>Waste disposal permit + prohe</u>	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available <input type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A
5	Gas Generation Records Remarks _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
6	Settlement Monument Records Remarks _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
7	Groundwater Monitoring Records Remarks _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
8	Leachate Extraction Records Remarks _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
9	Discharge Compliance Records <input type="checkbox"/> Air <input type="checkbox"/> Water (effluent) Remarks _____	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input type="checkbox"/> N/A <input type="checkbox"/> N/A
10	Daily Access/Security Logs Remarks _____	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A

IV. O&M COSTS																																																						
1	O&M Organization <input type="checkbox"/> State in-house <input type="checkbox"/> PRP in-house <input type="checkbox"/> Federal Facility in-house <input type="checkbox"/> Other _____	<input type="checkbox"/> Contractor for State <input type="checkbox"/> Contractor for PRP <input type="checkbox"/> Contractor for Federal Facility																																																				
2	O&M Cost Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> Funding mechanism/agreement in place Original O&M cost estimate _____ <input type="checkbox"/> Breakdown attached <div style="text-align: center;">Total annual cost by year for review period if available</div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">From _____</td> <td style="width: 20%;">To _____</td> <td style="width: 20%;"></td> <td style="width: 40%;"></td> <td style="width: 20%; text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td></td> <td></td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td></td> <td></td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td></td> <td></td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td></td> <td></td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> <td></td> </tr> </table>			From _____	To _____			<input type="checkbox"/> Breakdown attached	Date	Date	Total cost			From _____	To _____			<input type="checkbox"/> Breakdown attached	Date	Date	Total cost			From _____	To _____			<input type="checkbox"/> Breakdown attached	Date	Date	Total cost			From _____	To _____			<input type="checkbox"/> Breakdown attached	Date	Date	Total cost			From _____	To _____			<input type="checkbox"/> Breakdown attached	Date	Date	Total cost			
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3	Unanticipated or Unusually High O&M Costs During Review Period Describe costs and reasons: _____ _____ _____ _____ _____																																																					
V. ACCESS AND INSTITUTIONAL CONTROLS <input type="checkbox"/> Applicable <input type="checkbox"/> N/A																																																						
A. Fencing																																																						
1.	Fencing damaged Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Gates secured <input type="checkbox"/> N/A																																																				
B. Other Access Restrictions																																																						
1.	Signs and other security measures Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A																																																				

C. Institutional Controls (ICs)

1 **Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☐ No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☐ No ☐ N/A

Type of monitoring (e.g., self-reporting, drive by) _____

Frequency _____

Responsible party/agency _____

Contact _____

Name	Title	Date	Phone no

Reporting is up-to-date ☐ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☐ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☐ Yes ☐ No ☐ N/A

Violations have been reported ☐ Yes ☐ No ☐ N/A

Other problems or suggestions ☐ Report attached

** Cleaned properties recorded w/ county*

2. **Adequacy** ☐ ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks _____

D. General

1 **Vandalism/trespassing** ☐ Location shown on site map ☐ No vandalism evident

Remarks _____

2 **Land use changes on site** ☒ N/A

Remarks _____

3. **Land use changes off site** ☐ N/A

Remarks _____

VI. GENERAL SITE CONDITIONS

A. Roads ☐ Applicable ☐ N/A

1 **Roads damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A

Remarks *roads + alleys w/ damage from site work required w/in days*

B. Other Site Conditions			
Remarks _____			

VII. LANDFILL COVERS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
A. Landfill Surface			
1.	Settlement (Low spots) Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Settlement not evident
2.	Cracks Lengths _____ Remarks _____	<input type="checkbox"/> Location shown on site map Widths _____ Depths _____	<input type="checkbox"/> Cracking not evident
3.	Erosion Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Erosion not evident
4.	Holes Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Holes not evident
5.	Vegetative Cover <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram) Remarks _____	<input type="checkbox"/> Grass <input type="checkbox"/> Cover properly established	<input type="checkbox"/> No signs of stress
6.	Alternative Cover (armored rock, concrete, etc.) Remarks _____	<input type="checkbox"/> N/A	
7.	Bulges Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map Height _____	<input type="checkbox"/> Bulges not evident

8	Wet Areas/Water Damage <input type="checkbox"/> Wet areas <input type="checkbox"/> Ponding <input type="checkbox"/> Seeps <input type="checkbox"/> Soft subgrade Remarks _____	<input type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map Areal extent _____ Areal extent _____ Areal extent _____ Areal extent _____
9.	Slope Instability <input type="checkbox"/> Slides Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of slope instability
B. Benches <input type="checkbox"/> Applicable <input type="checkbox"/> N/A (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel)		
1.	Flows Bypass Bench Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
2.	Bench Breached Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
3	Bench Overtopped Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
C. Letdown Channels <input type="checkbox"/> Applicable <input type="checkbox"/> N/A (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)		
1	Settlement Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of settlement Depth _____
2	Material Degradation Material type _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of degradation Areal extent _____
3	Erosion Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of erosion Depth _____

4.	Undercutting <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of undercutting Areal extent _____ Depth _____ Remarks _____ _____
5.	Obstructions Type _____ <input type="checkbox"/> No obstructions <input type="checkbox"/> Location shown on site map Areal extent _____ Size _____ Remarks _____ _____
6.	Excessive Vegetative Growth Type _____ <input type="checkbox"/> No evidence of excessive growth <input type="checkbox"/> Vegetation in channels does not obstruct flow <input type="checkbox"/> Location shown on site map Areal extent _____ Remarks _____ _____
D. Cover Penetrations <input type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	Gas Vents <input type="checkbox"/> Active <input type="checkbox"/> Passive <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____
2.	Gas Monitoring Probes <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____
3.	Monitoring Wells (within surface area of landfill) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____
4.	Leachate Extraction Wells <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____
5.	Settlement Monuments <input type="checkbox"/> Located <input type="checkbox"/> Routinely surveyed <input type="checkbox"/> N/A Remarks _____ _____

E. Gas Collection and Treatment		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1	Gas Treatment Facilities <input type="checkbox"/> Flaring <input type="checkbox"/> Thermal destruction <input type="checkbox"/> Collection for reuse <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____		
2	Gas Collection Wells, Manifolds and Piping <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____		
3	Gas Monitoring Facilities (e.g., gas monitoring of adjacent homes or buildings) <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____		
F. Cover Drainage Layer		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Outlet Pipes Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____		
2	Outlet Rock Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____		
G. Detention/Sedimentation Ponds		<input type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Siltation Areal extent _____ Depth _____ <input type="checkbox"/> N/A <input type="checkbox"/> Siltation not evident Remarks _____		
2	Erosion Areal extent _____ Depth _____ <input type="checkbox"/> Erosion not evident Remarks _____		
3	Outlet Works <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____		
4	Dam <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____		

H. Retaining Walls		<input type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Deformations	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident
	Horizontal displacement _____	Vertical displacement _____	
	Rotational displacement _____		
	Remarks _____		
2.	Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
	Remarks _____		
I. Perimeter Ditches/Off-Site Discharge		<input type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Siltation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident
	Areal extent _____	Depth _____	
	Remarks _____		
2.	Vegetative Growth	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A
	<input type="checkbox"/> Vegetation does not impede flow		
	Areal extent _____	Type _____	
	Remarks _____		
3.	Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Erosion not evident
	Areal extent _____	Depth _____	
	Remarks _____		
4.	Discharge Structure	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
	Remarks _____		
VIII. VERTICAL BARRIER WALLS		<input type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Settlement	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Settlement not evident
	Areal extent _____	Depth _____	
	Remarks _____		
2.	Performance Monitoring	Type of monitoring _____	
	<input type="checkbox"/> Performance not monitored		
	Frequency _____	<input type="checkbox"/> Evidence of breaching	
	Head differential _____		
	Remarks _____		

IX. GROUNDWATER/SURFACE WATER REMEDIES		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
A. Groundwater Extraction Wells, Pumps, and Pipelines		<input type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1	Pumps, Wellhead Plumbing, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells properly operating <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____ _____		
2	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____ _____		
3	Spare Parts and Equipment <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks _____ _____ _____		
B. Surface Water Collection Structures, Pumps, and Pipelines		<input type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Collection Structures, Pumps, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____ _____		
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____ _____		
3.	Spare Parts and Equipment <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks _____ _____ _____		

C. Treatment System		<input type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Treatment Train (Check components that apply) <input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation <input type="checkbox"/> Air stripping <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Filters _____ <input type="checkbox"/> Additive (e.g., chelation agent, flocculent) _____ <input type="checkbox"/> Others _____ <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually _____ <input type="checkbox"/> Quantity of surface water treated annually _____ Remarks _____		
2.	Electrical Enclosures and Panels (properly rated and functional) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____		
3.	Tanks, Vaults, Storage Vessels <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs Maintenance Remarks _____		
4.	Discharge Structure and Appurtenances <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____		
5.	Treatment Building(s) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Needs repair <input type="checkbox"/> Chemicals and equipment properly stored Remarks _____		
6.	Monitoring Wells (pump and treatment remedy) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____		
D. Monitoring Data <i>OK (air)</i>			
1.	Monitoring Data <input checked="" type="checkbox"/> As routinely submitted on time <input checked="" type="checkbox"/> As of acceptable quality		
2.	Monitoring data suggests <input type="checkbox"/> Groundwater plume is effectively contained <input type="checkbox"/> Contaminant concentrations are declining		

D. Monitored Natural Attenuation			
1.	Monitoring Wells (natural attenuation remedy)		
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled
	<input type="checkbox"/> All required wells located	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> Good condition
	<input type="checkbox"/> N/A		
Remarks _____			
X. OTHER REMEDIES			
If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.			
XI. OVERALL OBSERVATIONS			
A. Implementation of the Remedy			
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.)			
<p>Homes that have been remediated w/in last 5 years are in various condition (so grass driven on vs. maintained), but contamination/risk has been removed. Homes currently being remediated are in various stages - pre-excavation (plan signed by owner), excavated, and backfilled and sealed. All excavations are completed w/in the workday so no contaminated soil remains exposed overnight.</p>			
B. Adequacy of O&M			
Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.			
<p>n/a. After 60 days, maintenance is responsibility of owner (for aesthetics), but no contamination/risk remains after remediation.</p>			

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.

Some owners have refused to permit remediation. These properties continue to be revisited and ~~inst~~ institutional controls, other than recording clean notices w/ the deed, will be evaluated.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

n/a

Appendix E



Property being excavated down to 6 inches



Excavated area of property



12 inch and 6 inch depth excavation areas



Remediated and restored (sodded) property



Remediated and restored (sodded) property



Remediated and restored (sodded) property



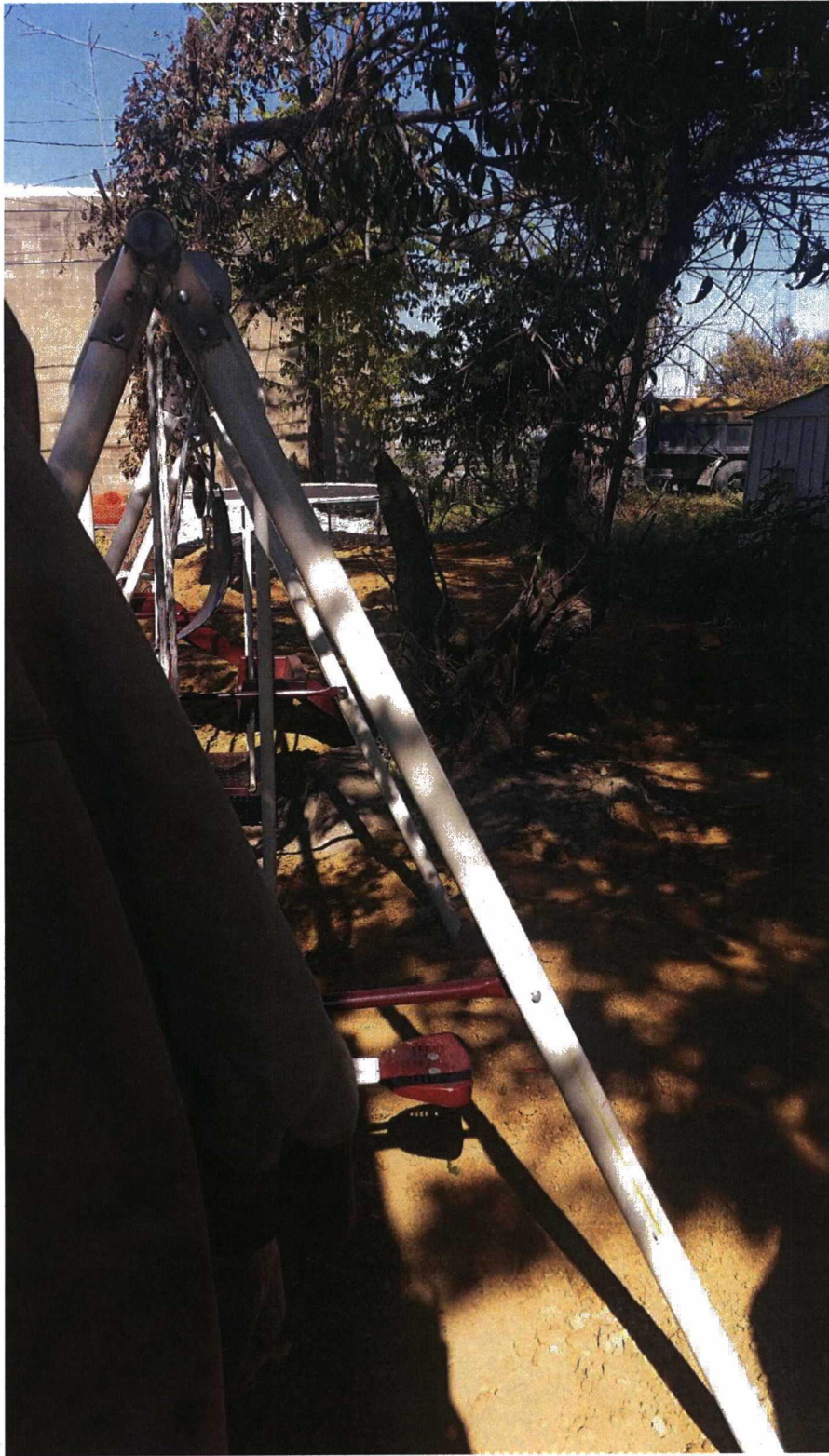
Remediated and restored (sodded) area at far end of photo



Excavated property



Excavated side yard



Excavated backyard, hand dug around tree



Excavated backyard

Appendix F

Requirement	Requirement Synopsis
Location-Specific ARARs	
Federal	
<p>Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.)</p>	<p>The Act provides protection and consultation with the U.S. Fish and Wildlife Service and state counterpart for actions that would affect streams, wetlands, other water bodies, or protected habitats. Action taken should protect fish or wildlife, and measures should be developed to prevent, mitigate, or compensate for project-related losses to fish and wildlife.</p> <p>This Act is considered an ARAR for site contaminants and any future remediation construction activities that may affect surface waters and streams.</p>
Action-Specific ARARs	
Federal	
<p>Hazardous Materials Transportation Act (49 U.S.C. 1801 et seq.)</p>	<p>The Act provides regulations governing the transportation of hazardous materials and hazardous waste. The regulations include recordkeeping and reporting requirements, labeling and packaging requirements, and detailed handling requirements for each mode of transport (rail, air, waterway, or road).</p> <p>Remedial alternatives involving transport of hazardous materials are not anticipated. Contaminated soils or wastes that are excavated for offsite disposal would, however, be tested for hazardous waste characteristics, and if soil or waste is found to be hazardous waste, the requirements of this act would be followed. Soils are required to be managed as a hazardous waste if they contain listed hazardous waste or have the characteristics of a hazardous waste.</p>
<p>Resource Conservation and Recovery Act (42 U.S.C. 321 et seq.)</p>	<p>RCRA was passed in 1976. It amended the Solid Waste Disposal Act by including provisions for hazardous waste management. The goals of RCRA are to promote conservation of natural resources while protecting human health and the environment. The statute sets out to control the management of hazardous waste from inception to ultimate disposal. RCRA is also linked closely with CERCLA, and the CERCLA list of hazardous substances includes RCRA hazardous wastes.</p> <p>The Act applies to remedies that generate hazardous waste. Soils are required to be managed as hazardous waste if they contain listed hazardous waste or have the characteristics of hazardous waste. The Act may apply and will be adhered to if future remedies generate waste that can be classified as hazardous.</p>
<p>Occupational Safety and Health Act (29 U.S.C. 61 et seq.)</p>	<p>The Act was passed in 1970 to ensure worker safety on the job. The U.S. Department of Labor oversees it. Worker safety at hazardous waste sites is addressed under 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response. General worker safety is covered elsewhere within the law.</p> <p>The Act is considered an ARAR for construction activities performed during the implementation of remedies.</p>

Clean Air Act (42 U.S.C. 7401 et seq.)	<p>The Act is intended to protect the quality of air and promote public health. Title I of the Act directed the USEPA to publish national ambient air quality standards for criteria pollutants. In addition, USEPA has provided national emission standards for hazardous air pollutants under Title III of the Act. Hazardous air pollutants are also designated hazardous substances under CERCLA.</p> <p>The Clean Air Act amendments of 1990 greatly expanded the role of National Emission Standards for Hazardous Air Pollutants by designating 179 new hazardous air pollutants and directed USEPA to attain maximum achievable control technology standards for emission sources. Such emission standards are potential ARARs if selected remedial technologies produce air emissions of regulated hazardous air pollutants.</p> <p>The Act is considered an ARAR for remedies that involve creation of air emissions such as excavation activities that might create dust.</p>
State	
Indiana Solid Waste Rules (IAC Title 329)	<p>This law applies to remedies that involve offsite disposal of materials typically involved with excavations.</p> <p>Contaminated soils or wastes that are excavated for offsite disposal would be tested for hazardous waste characteristics and, if soil or waste is found to be hazardous waste, the requirements of the Rules would be followed.</p>
Indiana Air Pollution Control Regulations (IAC Title 326)	The law is considered an ARAR for remedies that involve creation of air emissions such as excavation activities that have the potential to create dust.
Chemical-Specific ARARs	
Federal	
Clean Water Act (33 U.S.C. 1251 et seq.)	<p>The Act was passed in 1977. It is a major amendment of the original 1972 Federal Water Pollution Control Act. Its chief purpose is to restore and maintain surface water quality by controlling discharges of chemicals (priority toxic pollutants) to surface water. The act is closely linked to CERCLA; all 126 priority toxic pollutants under the act are CERCLA hazardous substances. Direct and indirect discharges of priority pollutants to surface water are regulated through NPDES. The NPDES program also includes ambient water quality standards and antidegradation policy standards.</p> <p>The Act is considered an ARAR for remedies involving construction activities that have the potential to affect surface water, such as excavation or that involve discharge of groundwater to surface water.</p>
State (To be Considered)	
Voluntary Remediation of Hazardous Substances and Petroleum (IC 13-25-F)	IC 13-25-5 established the Voluntary Remediation Program in 1993 and gave the IDEM the authority to establish guidelines for voluntary site closure. Under this authority IDEM developed a nonrule policy document, the Risk Integrated System of Closure, to guide site closures within the authority of IDEM's remediation programs. This guidance document does not have the effect of law.
Contained-in Policy Guidance for RCRA	Guidance document on management of remediation waste. This guidance document does not have the effect of law.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.idem.IN.gov

January 25, 2007

Ms. Jena Sleboda
Remedial Project Manager
U. S. EPA Region 5, Superfund Division
Mail Code: SR-6J
77 West Jackson Blvd
Chicago, Illinois 60604

Dear Ms. Sleboda:

Re: Applicable or Relevant and Appropriate
Requirements for Jacobsville Neighborhood Soil
Contamination Superfund Site, Evansville,
Vanderburgh County, Indiana

Indiana Department of Environmental Management staff have performed an evaluation to determinate the Applicable or Relevant and Appropriate Requirements (ARARs) for the Jacobsville Neighborhood Soil Contamination (JNSC) Superfund Site in Evansville, Vanderburgh County, Indiana. The ARARs determination was evaluated for the three proposed remedial alternatives, which include Alternative 1 - No Action, Alternative 2 - Soil Excavation, Backfill and Site Restoration, and Alternative 3 - In Situ Treatment and Site Restoration. The proposed remedial alternatives are subject to the Indiana Administrative Code (IAC) and Indiana Code (IC) as follows:

1. Chemical-Specific Requirements:

- a. 326 IAC 2 regulates any source which has the potential to emit air pollutants. Since the JNSC site is a National Priorities List (NPL) site, registration and a permit may not be required. The facility will, however, need to comply with the substantive requirements of registration and a permit.
- b. 329 IAC 3.1 establishes a hazardous waste management program consistent with the requirements of the Resource Conservation and Recovery Act (RCRA). All wastes generated by remediation activities must undergo a waste determination. All wastes determined to be hazardous must be disposed in an approved RCRA permitted facility in accordance with 40 CFR 260-280.
- c. 329 IAC 10 regulates the management of solid wastes. All waste determined to be nonhazardous must be disposed in a facility permitted to accept such waste.

2 Action-Specific Requirements:

- a. Hazardous Air Pollutants (HAPs) are defined at 326 IAC 1-2-33.5 as any air pollutant listed pursuant to Section 112(b) of the Clean Air Act. HAPs are regulated because of their toxic effects. HAPs are regulated by 326 IAC 2. This site is contaminated with lead and possibly arsenic. Compounds of arsenic and lead emitted into the air are HAPs.
 - 326 IAC 2-5.1-2(a)(1)(A) requires a source that has the potential to emit five (5) tons per year of particulate matter (PM) to apply for a registration. A source with lower emissions is exempt.
 - 326 IAC 2-5.1-2(a)(1)(F) requires a source that has the potential to emit two-tenths (0.2) ton per year of lead to apply for a registration. A source with lower emissions is exempt. The report evaluating the three remedial alternatives gives no measurement or estimate of the amount of contaminants that may be emitted to the air as a result of the remedial actions. Therefore, the potential air pollution emissions resulting from the remedial actions cannot be calculated.
- b. Fugitive dust, defined as dust that crosses onto a property line, is defined and regulated by 326 IAC 6-4-1. This includes the generation of particulate matter to the extent that some portion of the material escapes beyond the property line or boundaries of the property, right of way, or easement on which the source is located. Fugitive dust and particulate matter releases may occur when soil is disturbed during remediation, including excavation of contaminated soils, transportation of soil, and backfilling. Particulate matter is defined at 326 IAC 1-2-52 and regulated by 326 IAC 2 and 326 IAC 6.
- c. 326 IAC 6-4-4 requires that any vehicle driven on any public right of way must not allow its contents to escape and form fugitive dust. This rule applies to any soil movement or removal actions.
- d. 329 IAC 3.1 (<http://www.in.gov/legislative/iac/T03290/A00031.PDF>) establishes a hazardous waste management program consistent with the requirements of RCRA.
- e. Requirements for solid waste land disposal facilities can be found in 329 IAC 10.
- f. The possibility of impact on surface water would be minimal because there is no proven surface water migration pathway (www.epa.gov/supfund/sites/docrec/pdoc1711.pdf). However, if a discharge to surface water is anticipated, 327 IAC 2-1-1.5 and 2-1-6, should be followed.
- g. Additional information needs to be provided to the Indiana Department of Natural Resources (IDNR) Division of Historical Preservation in order for them to conduct a complete analysis of the proposed remedies. IDEM staff provided the IDNR Division of Historic Preservation staff a hard copy of the draft FS Report. A copy of their January 4, 2007, letter is enclosed. The IDNR, Divisions of Water or Fish and Wildlife, has no ARARs for the JNSC Superfund Site.

3. There are no Location-Specific Requirements at this time.

4. To Be Considered (TBC)

- a. The IDEM Non-Rule Policy Document entitled "Contained-in Policy Guidance for RCRA" (NPD ID number WASTE-0052, 2002), which in turn references the federal guidance Management of Remediation Waste Under RCRA, EPA Publication Number 530-F-98-026, is a TBC. This

nonrule policy document is intended solely as guidance and does not have the effect of a law or represent formal IDEM decisions or final actions. It is applicable to soil and groundwater which is generated and subsequently managed, and does not replace or alter requirements for closure or cleanups found in various regulatory authorities. This nonrule policy is available at <http://www.in.gov/idem/rules/policies>.

If you have questions concerning this correspondence, please feel free to contact me by email at kherron@ide.IN.gov or by phone at 317-234-0354.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin D. Herron", with a stylized flourish at the end.

Kevin D. Herron, Project Manager
Federal Programs Section
Office of Land Quality
Indiana Department of Environmental Management

KDH:bl
Enclosure
cc: Rex Osborn

DNR

Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 Indianapolis, IN 46204-2739
Phone 317-232-1646 • Fax 317-232-0693 dhp@dnr.in.gov

Mitchell E. Daniels, Jr., Governor
Robert E. Carter, Jr., Director



January 4, 2007

Kevin Herron
Indiana Department of Environmental Management
100 North Senate Avenue
Mail Code 50-01
Indianapolis, Indiana 46204

JAN 9 2007

Agency Indiana Department of Environmental Management ("IDEM")

Re Information regarding applicable or relevant and appropriate requirements pertinent to the Jacobsville Neighborhood Soil Contamination Superfund Site (DNR #12494, DHPA #1325)

Dear Mr. Herron

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated November 29, 2006 and received on December 7, 2006 for the above indicated project in Evansville, Vanderburgh County, Indiana.

The Indiana SHPO is unable to determine by the information provided if any state funding will be involved for this project. If there will be an undertaking with the potential to effect historic resources, the following information will need to be submitted to our office for a review:

- 1) Detail any construction, demolition, and earthmoving activities
- 2) Define the area of potential effects¹ and provide a map or a good quality photocopy of a map containing the following:
 - The boundaries of the area of potential effects and the precise location of the project area within those boundaries clearly outlined in dark ink on a copy of the relevant portion of a town, city, county, or U.S. Geological Survey quadrangle map
 - The names of nearby landmarks clearly labeled (e.g., major streets, roads, highways, railroads, rivers, lakes)
- 3) Give the precise location of any buildings, structures, and objects within the area of potential effects (e.g., addresses and a site map with properties keyed to it)
- 4) Give the known or approximate date of construction for buildings, structures, objects, and districts within the area of potential effects
- 5) Submit historical documentation for buildings, structures, objects, and districts within the area of potential effects
- 6) List all sources checked for your historical research of the area of potential effects. The Indiana SHPO recommends consulting the 1993 Vanderburgh County Interim Report for this information.

¹Area of potential effects means the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. The area of potential effects is influenced by the scale and nature of the undertaking and may be different for different kinds of effects caused by the undertaking (see 36 C.F.R. § 800.16(d)).

- 7) Provide recent, clear photographs or good quality computer-generated images (not photocopies or aerial photographs), keyed to a site plan, showing the exterior of any buildings, structures, objects, or land *that could be affected in any way by the project*
- 8) Describe the current and past land uses within the project area, in particular, state whether or not the ground is known to have been disturbed by construction, excavation, grading, or filling, and, if so, indicate the part or parts of the project area that have been disturbed and the nature of the disturbance, agricultural tilling generally does not have a serious enough impact on archaeological sites to constitute a disturbance of the ground for this purpose

Once the indicated information is received, the Indiana SHPO will resume identification and evaluation procedures for this project. Please keep in mind that additional information may be requested in the future.

A copy of the revised 36 C.F.R. Part 800 that went into effect on August 5, 2004, may be found on the Internet at www.achp.gov for your reference. If you have questions, please contact Miriam Widenhofer of our office at (317) 232-1646.

In all future correspondence please refer to DHPA # 1325

Very truly yours,



Miriam L. Widenhofer
Structures Review Assistant

MLW mlw

cc Christie Stanifer, Indiana Department of Natural Resources, Division of Water



City of Evansville
Environmental Protection Agency
Suite 100 – C K. Newsome Community Center
100 East Walnut Street
Evansville, IN 47713
Phone (812) 435-6145 * Fax (812) 435-6155

Jonathan Weinzapfel, Mayor

January 23, 2007

U S Environmental Protection Agency – Region 5
Ms Yolanda Bouchee, Community Involvement Coordinator
Ms Jena Sleboda, Remedial Project Manager
77 W Jackson Blvd.
Chicago, IL 60604

RE: Jacobsville Neighborhood Soil Contamination Site Clean Up

Dear Ms. Bouchee and Ms. Sleboda

First, let me welcome you back to Evansville and express my gratitude for U.S. EPA's clean up of these contaminated properties! These yards and homes will be safer for our children because of this project and we sincerely appreciate your efforts!

For decades, to try to protect and improve our air quality, Evansville has enforced air quality ordinances more stringent than state or federal regulations, including rules intended to minimize dust from earthmoving activities. On January 8, 2007, the City adopted even more stringent rules. Because these new rules are very recent and because it is especially important to contain the lead / arsenic contaminated dust to prevent additional contamination, I wanted to make a special effort to provide you with this information so you could forward it to contractors interested in bidding on this project. The applicable portions of the Municipal Code are attached to this letter, but to summarize our requirements in plain English, contractors must:

- Keep the mud and dirt off streets and thoroughfares.
- Keep the dirt out of the air and prevent it from visibly crossing property lines.
- Cover the load on dump trucks or keep the load below the cab or cargo box.
- Prevent materials from leaking from the truck cargo area.

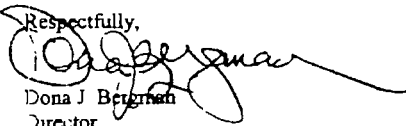
As major projects are announced for this region, Evansville Mayor Weinzapfel has made a special point of contacting the project planners and encouraging them to implement voluntary measures to conserve energy and reduce their impacts on the environment. For the Jacobsville project, we suggest that U.S. EPA include the following contractor requirements:

- Use dust suppressant measures as needed to minimize dust from earth-moving activities;
- Design and follow adequate Erosion Control Plans;
- Utilize Storm Water Best Management Practices,
- Require that all on and off-road equipment (bulldozers, backhoes, etc.) used in this project are equipped with particulate filters or Diesel Oxidation Catalysts (DOCs).
- Use a blend of 5% soy biodiesel and 95% Ultra-Low Sulfur Diesel for all diesel fueled equipment;
- Institute and enforce on-site "No-Idling" policies for all mobile equipment (semi-trucks, autos, construction equipment and delivery vehicles).

More than likely, U.S. EPA has already instituted these and additional measures for such projects and the suggestions provided above are already in place. Still, good ideas deserve repeating and we appreciate your consideration.

Again, thank you for your efforts and attention. Please contact the Evansville EPA if we can be of any assistance with this project.

Respectfully,


Dona J. Bergman
Director

Pc Mayor Jonathan Weinzapfel
Ms Rose Young, Chief of Staff
Evansville EPA Board

- 7) Provide recent, clear photographs or good quality computer-generated images (not photocopies or aerial photographs), keyed to a site plan, showing the exterior of any buildings, structures, objects, or land *that could be affected in any way by the project*
- 8) Describe the current and past land uses within the project area; in particular, state whether or not the ground is known to have been disturbed by construction, excavation, grading, or filling, and, if so, indicate the part or parts of the project area that have been disturbed and the nature of the disturbance; agricultural tilling generally does not have a serious enough impact on archaeological sites to constitute a disturbance of the ground for this purpose

Once the indicated information is received, the Indiana SHPO will resume identification and evaluation procedures for this project. Please keep in mind that additional information may be requested in the future

A copy of the revised 36 C F R. Part 800 that went into effect on August 5, 2004, may be found on the Internet at www.achp.gov for your reference If you have questions, please contact Miriam Widenhofer of our office at (317) 232-1646

In all future correspondence please refer to DHPA # 1325

Very truly yours,



Miriam L. Widenhofer
Structures Review Assistant

MLW mlw

cc: Christie Stanifer, Indiana Department of Natural Resources, Division of Water

To view the Evansville Environmental Protection Agency's portion of the Municipal Code, go to "www.evansville.gov/epa" - on the left hand side of the home page, click on "Municipal Code of Evansville".

Section 3.30.212 Fugitive Particulate Matter.

- (A) **APPLICABILITY OF RULE:** This section shall apply to all sources of fugitive particulate matter.
- (B) **DEFINITIONS:** Definitions of terms as set forth in this Section.
- (1) "AS NEEDED BASIS." Means the frequency of application necessary to maintain compliance with the requirements of this Section.
 - (2) "CONSTRUCTION SITE ACCESS." Means a stabilized stone surface at all points of ingress or egress to a construction site for the purpose of capturing or detaining sediment carried by tires of vehicles or other equipment entering or exiting the project site.
 - (3) "FUGITIVE PARTICULATE MATTER." Means the generation of particulate matter to the extent that some portion of the material escapes beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located or the activity causing the fugitive particulate matter emissions is taking place.
 - (4) "GROUND LEVEL." Means from zero (0) inches to thirty (30) feet above the ground.
 - (5) "MANUFACTURING PROCESS." Means any single or series of actions, operations, or treatments in which a mechanical, physical, or chemical transformation of materials occurs that emits or has the potential to emit, particulate in the production of the product. The term includes transference, conveyance, or repair of a product.
 - (6) "NOTICE OF INTENT LETTER." Means a written notification indicating a person's intention to comply with the terms of a specified general permit rule in lieu of applying for a specific NPDES permit and includes information as required in 327 IAC 15-3 and the general permit rule.
 - (7) "OVERSPRAY." Means the particulate matter resulting from surface coating activities not deposited on the part or surface for which it was intended.
 - (8) "PARTICULATE MATTER." Any finely divided solid or liquid material, excluding uncombined water.
 - (9) "PAVED PARKING LOT." Means any asphalt or concrete surfaced parcel of land located on the property of, or owned by, an individual or company upon which automobiles or other motorized vehicles are parked.
 - (10) "PAVED ROAD." Means any asphalt or concrete surfaced thoroughfare or right-of-way designed or used for vehicular traffic and located on the property of, or owned by, an individual or company.
 - (11) "UNPAVED PARKING LOT." Means any parcel of land located on the property of, or owned by, an individual or company lacking asphalt or concrete surfacing materials upon which automobiles or other motorized vehicles are parked.

- (12) "UNPAVED ROADS." Means any surfaced thoroughfare or right-of-way, other than a paved road as defined above, which is designed or used for vehicular traffic located on the property of, or owned by an individual or company.
- (13) "SURFACE COATING." Means the application of powder coating or a solvent or water-based coating to a surface that imparts protective, functional, or decorative films in which the application emits, or has the potential to emit, particulate matter. Surface coating does not include galvanizing.
- (14) "USED OIL." Means:
 - (a) Any oil that has been refined from crude oil that has been used and as a result of such use is contaminated by physical or chemical impurities; or
 - (b) Any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities.
 - (c) Any used oil will be presumed to be contaminated by physical or chemical impurities. It shall be the burden of the owner or operator to refute this presumption by providing acceptable scientific data to the Director.
- (C) **EXEMPTIONS.** The following may be exempted from the requirements of this Section:
 - (1) Release of steam not in combination with any other gaseous or particulate pollutants unless the steam creates a nuisance or hazard.
 - (2) Fugitive particulate matter resulting from demolition where every reasonable precaution has been taken in minimizing fugitive particulate matter emissions.
 - (3) Fugitive particulate matter caused by adverse meteorological conditions.
 - (4) Fugitive particulate matter from parking areas and access drives on properties zoned R-1, R-2, or Agricultural so long as the actual usage of the property is in conformance with the zoning.
- (D) **USED OIL.** Application of used oil.
No person shall apply or allow the application of used oil to any ground surface.
- (E) **VIOLATIONS.**
 - (1) The owner or operator of a source will be considered in violation of this section if evidence is obtained to verify the subject fugitive particulate matter originated from that source.
 - (2) A source or sources generating fugitive particulate matter shall be in violation of this Section if:
 - (a) A qualified representative of the Director observes fugitive particulate matter visibly crossing the site boundary or property line at ground level.
 - (b) A qualified representative of the Director observes mud or soil tracked from the site boundaries onto a public street, thoroughfare, road, or public or private right-of-way.
 - (c) A sworn law enforcement official observes fugitive particulate matter visibly crossing the site boundary or property line at ground level.
 - (3) Photographs or video evidence may be utilized to determine a violation of this Section.

(F) CONSTRUCTION OR DEMOLITION ACTIVITIES. Fugitive particulate matter resulting from construction or demolition activities shall be controlled.

- (1) Construction Activities disturbing over one (1) acre:
 - (a) For activities subject to 327 IAC 15-5, a stable construction site access shall be provided at all points of construction traffic ingress and egress to the project site.
 - (b) The Site Operator, as designated on the Notice of Intent letter issued pursuant to 327 IAC 15-5-2 (d) (1), shall be considered in violation of this Section if a qualified representative of the Director visually verifies mud or soil tracked from the construction site onto a public street, road, alley, highway, public or private right-of-way or other thoroughfare.
 - (i) In addition to the Site Operator, the Director may also determine other companies or individuals are in violation of this Section.
 - (ii) Failure to obtain a Notice of Intent letter or to provide a Notice of Intent letter upon request by the Director shall be a violation of this Section.

(G) MOTOR VEHICLE SOURCES. Fugitive particulate matter resulting from transportation or hauling of loose material such as, but not limited to, soil, sand, gravel, coal, grain, and other similar materials shall be controlled.

- (1) No vehicle shall be driven or moved on any public street, road, alley, highway, or other thoroughfare, unless such vehicle is so constructed as to prevent its contents from dripping, sifting, leaking, or otherwise escaping therefrom so as to create result an emission of particulate matter.
- (2) Soil, sand, gravel, coal, grain and other similar materials may be hauled in open trucks as long as the material is not allowed to fall on a public or private way and the requirements of 3.30.212 (G) (3) hereof are complied with.
- (3) Vehicles hauling soil, sand, gravel, coal, grain and other similar materials on a public or private way without a cover shall be loaded in the following manner:
 - (a) The peak, or highest point, of the load shall not be higher than the top of the vehicle cab or cargo box, whichever is lower.
 - (b) All vehicles must have a leak proof gate. Pick-up trucks and other vehicles with a low-hinged tailgate must have a liner to prevent leakage.
 - (c) All areas of the vehicle not within the confines of the cargo box shall be free of loose materials.
 - (d) The vehicle cargo area, including but not limited to the bottom, tailgate hinges, latches and sideboards, must be in a substantial state of repair to prevent shifting or leakage of the cargo.

Section 3.30.251 Penalties

(A) In accordance with Section 3.30.201, unless specifically provided for in this Section, monetary penalties for violations of this Subchapter occurring within a thirty-six (36) month period shall not be less than those provided by the following.

- (1) First Violation: \$ 50.00
 - (a) The Director may issue a Letter of Violation without a monetary penalty for the first violation.
 - (b) If the Director issues only a Letter of Violation, if a second violation is determined within a thirty-six (36) month period from the date of the first violation, the minimum monetary penalty shall begin at fifty dollars (\$50.00) for the second violation.

- (2) Second Violation: \$ 150.00
 - (3) Third Violation: \$ 500.00
 - (4) Fourth Violation: \$1,500.00
 - (5) Fifth and subsequent Violations: \$1,500.00 to \$7,500.00.
- (B) Violations prior to the effective date of this ordinance shall be included in the calculation of the number of offenses. The maximum monetary penalty shall be \$7,500.00 per day, per violation.
- (C) After the Director has determined that four (4) or more violations of this Subchapter have occurred at the same location or by the same person or company within a six-month period, the Director may, subject to appeal to the Environmental Protection Agency Board, upon determining a fifth violation, stop work on the project or at the facility and cause the immediate cessation of work on all or part of the project or at the facility until the conditions causing the violation(s) have been corrected.
- (D) The Director, subject to appeal to the Environmental Protection Agency Board, may suspend, cancel or refuse to issue or renew any applicable permit provided in this Subchapter (3.30.195–3.30.251) relating to the violation committed.
- (E) If the Director's action pursuant to subsections (C) and/or (D) are appealed, the Board shall fix a place and time not less than forty-eight (48) hours or more than seventy-two (72) hours (excluding Saturdays, Sundays and legal holidays) thereafter for a hearing to be held before the Board. Not more than twenty-four (24) hours after the commencement of such a hearing, the Board shall affirm, modify or set aside the order of the Director.

Appendix G

NATION & WORLD

As primary tightens, Dems brace for messy winter

■ 'There's a real race going on'

By Lisa Lerer
and Ken Thomas
Associated Press

WASHINGTON — There was a time when Democrats fretted about Hillary Clinton's presidential campaign becoming a coronation and leaving her without the tests of a primary season to prepare for a general election matchup against the Republican nominee.

No one is worried about that anymore.

In the past two weeks, the Democratic race has gone from a relatively civil disagreement over policy to a contentious winter competition between former Secretary of State Clinton and Vermont Sen. Bernie Sanders.

Clinton's institutional strength and her support among the minority voters who make up a large portion of the party's base still put her in a formidable

position, even as polls show Sanders surging in Iowa and maintaining an edge in New Hampshire.

But should Sanders prevail in those first two states on the 2016 campaign calendar, Clinton's bid to succeed President Barack Obama may mean a much longer and messier path than her supporters once envisioned. It would plunge Democrats into the kind of primary fight they have gleefully watched Republicans struggle to contain in the past year.

"You have to look at these numbers and say there's a real race going on," said Democratic pollster Mark Mellman. "It's a race where Hillary Clinton has significant advantages in the long run. But it's a real race."

The contest was certain to intensify this weekend, with the Democratic candidates gathering in Charleston, South

Carolina, on Saturday night for a party dinner and the annual fish fry hosted by Rep. James Clyburn, D-S.C. Then there's the Sunday night debate, the final one before the Iowa caucuses on Feb. 1. The New Hampshire primary will be Feb. 9.

"I think it is a new phase of the campaign," said Joel Benenson, Clinton's chief campaign strategist. "We talked about how close this was going to be in (Iowa and New Hampshire). They always are historically and we're ready to have this debate engaged."

In the past week, Clinton has shifted course in apparent response to Sanders' strong poll results. She has stepped up her criticism of her rival, a self-described democratic socialist, after carefully avoiding that during the campaign.

The new approach carries risks. Sanders is popular with liberals who are part of the coalition that Clinton will need to win the White House.

Clinton and her supporters

still remember her disappointing third-place finish in Iowa in 2008 against Obama. Clinton's team has retooled her schedule to add stops in Iowa in the week ahead. The candidate has made near-daily television appearances where she has challenged Sanders' stances on health care and gun control.

Clinton and Sanders were each booked on four Sunday morning news shows.

Her campaign said Saturday it was sending out top party representatives, including the mayors of Philadelphia and Atlanta, to campaign for her in Iowa. Former President Bill Clinton has been out making her case in early voting states, and daughter Chelsea Clinton has offered critical words about Sanders, leading to a back-and-forth over his health care plan.

"They're very afraid of a repeat in 2008 and they're getting very aggressive," said Sanders campaign manager Jeff Weaver. "I expect at any moment now

they'll go hard negative on us and we're prepared for that. But we won't be negative on them."

Clinton has tried to dismiss Sanders' proposals as unrealistic and disingenuous. She points to his 2005 vote for legislation giving gun manufacturers immunity from lawsuits as a sign that the senator wouldn't fight forcefully enough against powerful interest groups.

Sunday's debate is in the city where a 21-year-old white man shot and killed nine people attending a prayer service at an African-American church last summer. The setting may give Clinton a chance to confront Sanders on his past votes related to gun control.

But in a campaign that has seen billionaire Donald Trump rise to the top of the Republican presidential field by capitalizing on an electorate angry with the political establishment, Clinton may once again be embracing the mantle of experience at a time when outsider status is in vogue.

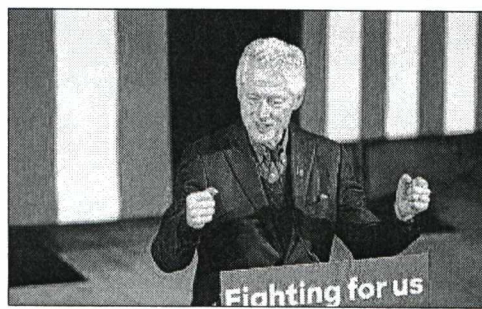
Clinton campaign utilizing husband Bill very carefully

■ Aides trying to limit former president's media remarks

By Lisa Lerer
Associated Press

KEENE, N.H. — Bill Clinton promised voters in 1992 that they'd be getting "two for the price of one" if they elected him to the White House — a presidential duo of the young Arkansas governor and his Yale Law-educated wife.

Nearly a quarter-century later, the duo is back



Former President Bill Clinton speaks during a campaign stop for his wife, Democratic presidential candidate Hillary Clinton, on Wednesday at Keene State College in Keene, N.H.

— but not quite the same. As Hillary Clinton fends off a rising challenge from

Bernie Sanders, his wife's campaign aides are grappling with how best to deploy what she has described as her "not-so-secret weapon."

Their answer: very, very carefully.

During campaign swings through Iowa and New Hampshire, Bill Clinton treaded fastidiously through tightly controlled campaign events. A natural-born chit-chatter, he was not giving interviews. When he stopped to talk with reporters after one recent event, campaign aides turned up the music, making a conversation all but impossible.

His remarks to voters have been relatively subdued: long on history, statistics and nostalgia. He's dodged questions about Sanders and Republican front-runner Donald Trump, who's been baiting the Clinton family with comments about the former president's past sexual improprieties.

"I'm not going there," Bill Clinton said on Wednesday, when asked about Sanders at a campaign event in New Hampshire. "I came here to tell people why I thought Hillary should be president and her ideas are better."

While Bill Clinton remains a popular figure among Democrats, some of the key achievements of his administration form the basis of Sanders' critique against his wife — that she's too willing to compromise liberal ideals for political gain.

The Vermont senator has denounced his rival's policies on trade, same-sex marriage, crime and welfare cuts. He's made reinstating Glass-Steagall, a Depression-era banking law repealed under Bill Clinton's administration, a central attack line of his campaign.

"People don't have a long memory, but Bernie's doing his best to remind them," said Roger Hickey, a co-director of the liberal Campaign for America's Future. "People don't want a recycling of Bill Clinton's presidency. They want somebody who's willing to stand up to the billionaires and corporate power."

Clinton aides say those critiques miss the larger picture of wage growth, job creation and a balanced budget. In a debate last month, Clinton said she would turn to her husband for economic advice.

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EPA Begins Review of the Jacobsville Superfund Site
Evansville, Indiana

The U.S. Environmental Protection Agency is conducting a five-year review of the Jacobsville Neighborhood Soil Contamination Superfund site located in Evansville. The Superfund law requires regular checkups of sites that have been cleaned up — with waste managed on-site — to make sure the cleanup continues to protect people and the environment. This is the first five-year review of this site.

The EPA's cleanup of contaminants consists of excavation of contaminated soil in residential yards, backfilling with clean fill, and restoration of the properties to as close to original condition as possible. The cleanup of the site is ongoing, but the Superfund law requires a five-year review be done in five years of starting the cleanup.

The review should be completed this summer. More information is available at the Evansville Vanderburgh Public Library, 840 E Chandler Ave. and at www.epa.gov/superfund/jacobsville-neighborhood-soil.

The five-year review is an opportunity for you to tell the EPA about site conditions and any concerns you have. Contact:

Charles Rodriguez
Community Involvement Coordinator
312-886-7472
rodriguez.charles@epa.gov

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You may also call the EPA toll-free at 800-621-8431, 8:30 a.m. to 4:30 p.m., weekdays.

NATION

Rubio under fire in GOP debate after rise in polls

By Julie Pace
and Julie Bykowitz
Associated Press

MANCHESTER, N.H. — Marco Rubio, a first-term senator on the rise in the presidential race, faced a barrage of attacks in Saturday night's Republican debate, with rivals vigorously challenging his readiness to be president and the depth of his expertise as they sought to salvage their own White House hopes.

Sen. Ted Cruz, fresh off his victory in the Iowa caucuses, also came under withering criticism for controversial political tactics, with one candidate disparaging him for having "Washington ethics" and being willing to test the campaign's legal limits.

The focus on the two senators allowed GOP front-runner Donald Trump to go largely untouched in his return to the debate stage. His grip on the Republican lead has been shaken by his second-place finish in Iowa, though the next contest Tuesday in New Hampshire is still his to lose.

New Hampshire's primary could further shrink an already shrinking GOP field. Hard-fought, expensive and far-ranging, the campaign has become a fight for the future of the Republican Party, though the direction the GOP will ultimately take remains deeply uncertain.

Florida's Sen. Rubio has sought to appeal both to mainstream Republicans and those eager to upend the status quo. But his rivals, particularly New Jersey Gov. Chris Christie, have been blistering in their criticism of what they see as his slim qualifications to serve as commander in chief.

"You have not been involved in a consequential decision where you had to be held accountable," Christie said. "You just simply haven't."

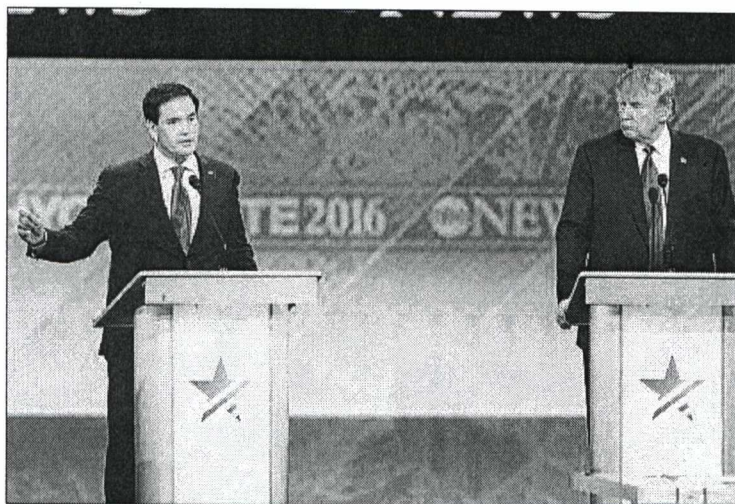
Christie, as well as former Florida Gov. Jeb Bush and Ohio Gov. John Kasich, has staked his campaign on New Hampshire, pouring most of his resources into the state in recent weeks. All three played a more substantial role in

this debate than in earlier contests, though each is still likely to face intense pressure to end his campaigns if he's unable to pull off a strong finish in New Hampshire.

Gov. Christie built his closing argument around his criticism of Rubio, and he kept up that approach on the debate stage. He accused the senator of being a candidate governed by talking points — then pounced when the senator played into his hands by repeating multiple times what appeared to be a planned response to criticisms about his qualifications.

"That's what Washington, D.C., does," Christie said. "The drive-by shot at the beginning with incorrect and incomplete information and then the memorized 25-second speech that is exactly what his advisers gave him."

Rubio has sought to deflect criticism of his relative inexperience and the comparisons it draws to President Barack Obama by arguing the problem with the president isn't that he's naive, but that



Republican presidential candidate Sen. Marco Rubio, R-Fla., answers a question as Republican presidential candidate businessman Donald Trump listens during a Republican primary debate hosted by ABC News at the St. Anselm College Saturday in Manchester, N.H.

he's pushing an ideology that hurts the country. He made that point repeatedly throughout the debate.

Cruz was the victor in Iowa, triumphing over billionaire Trump by drawing heavily on the support of evangelical voters. But

he's faced criticism for messages his campaign sent to voters ahead of the caucuses saying rival Ben Carson — another favorite of religious conservatives — was dropping out and urging the retired neurosurgeon's supporters to

back him instead.

Cruz apologized for his campaign's actions Saturday, but not before Carson jabbed him for having "Washington ethics."

Those ethics, he said, "say if it's legal, you do what you do to win."

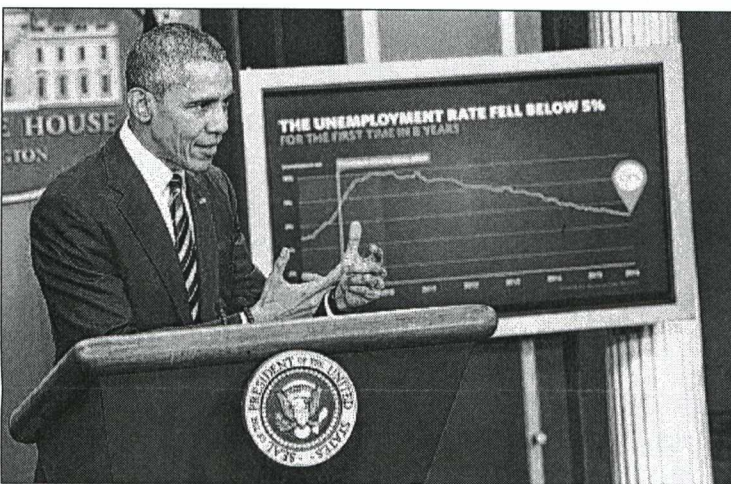
GOP-led Congress unlikely to OK Obama's new clean energy plan

By Darlene Superville
Associated Press

WASHINGTON — President Barack Obama said Saturday that he will ask the Republican-led Congress to double spending on research and development into clean energy by 2020. But the request is unlikely to be fulfilled.

GOP lawmakers scoff at the science behind climate change and dismiss Obama's pleas for the issue to be dealt with urgently. In an unusual twist in Obama's final year in office, the Republican leaders of the House and Senate budget committees have said they will not hold a customary hearing on the president's budget proposal the day after they receive it.

Obama on Tuesday plans to send to Congress the spending blueprint for the budget year that begins Oct. 1. The release will come on the day when New Hampshire voters get their say in the first presidential primary of the 2016 race to



President Barack Obama speaks about the economy Friday during a news conference in the Brady Press Briefing Room of the White House in Washington. The president said the U.S. has the strongest, most durable economy in the world. He pointed to wage and income growth, job growth, lower oil prices and increasing health insurance as evidence.

succeed him. "Rather than subsidize the past, we should invest in the future," Obama said in his weekly radio and Internet address, outlining

his wish for the increased spending.

Federal spending on research and development of clean energy would jump from \$6.4 billion this year to \$12.8 billion by 2020 under Obama's proposal, administration officials said.

Spending would increase by about 15 percent in each of the five years of the pledge. If approved, the budget that takes effect Oct. 1 would provide \$7.7 billion for clean energy research and development across 12 federal departments and agencies for the 2017 fiscal year.

Obama's proposal is part of an initiative he announced at last year's U.N. climate conference in Paris.

Some 20 countries, including the U.S., China, India and Brazil, have committed to double their respective budgets for this type of research over five years.

The White House said this past week that Obama wants oil companies to pay a \$10 fee on every barrel of oil to help raise money for spending on clean transportation to combat climate change.

By Catherine Lucey
Associated Press

PORTSMOUTH, N.H. — The private email server. The Wall Street ties. The evolving policy positions. The speaking fees.

The concerns vary, but Hillary Clinton seems to be having trouble earning the public's trust.

Ahead of Tuesday's New Hampshire primary, the Democratic presidential candidate is trying to convince voters that she is authentic. Rival Bernie Sanders is stepping up criticism of her financial industry connections and questioning whether she is a true liberal.

His message connects with younger people. They seem less interested in Clinton's pitch as a "progressive who gets things done" than in Sanders' call to break up big financial institutions and expand social programs as part of a "political revolution."

"I have a harder time believing her sincerity," said Suzanne Roberge, 32, of Rochester, who attended a Sanders rally. "I don't have as much trust."

Roberge added: "She's changed her mind on different issues. Bernie Sanders has been so consistent."

Added Sheila Kelley, 59, of Manchester, a Sanders supporter: "She doesn't seem truthful. It seems like she's trying to be everything to everyone."

Questions about Clinton's authenticity probably hurt her in Iowa, where the former secretary of state squeaked out a narrow victory over the Vermont senator in Monday's leadoff caucuses.

Democratic caucus-goers who cared most about candidates who are "honest and trustworthy" or who "care about people like me" overwhelmingly supported Sanders, according

to precinct polls conducted for The Associated Press and television networks. Clinton performed far better with people who listed experience or electability as a top concern.

Eight in 10 young people surveyed in Iowa said honesty or caring about people like them are the top qualities for which they are looking.

The surveys of people entering the Democratic caucuses found that Sanders had over 80 percent support from people 29 or younger. Clinton was backed by nearly 70 percent of those 65 and older.

In a Quinnipiac University poll in December, Clinton rated highly among all registered voters for her experience and leadership qualities, but 59 percent said she was not honest and trustworthy.

Most Democrats in that survey did say Clinton was honest and trustworthy. But a Washington Post/ABC News poll conducted in January suggests she may have cause for concerns there, too.

That poll found that while Clinton had a substantial lead over Sanders among Democrats, she lagged behind him on the issue of trust: 48 percent said Sanders was more honest and trustworthy, compared with 36 percent for Clinton.

Sanders has fed some people's concerns about trusting Clinton while picking his fights carefully.

For example, he gave her a pass on her past email practices. But he has gone after her for taking Wall Street money, letting a political action committee raise millions to help her and for not being liberal enough, in his view.

"One of the things we should do is not only talk the talk, but walk the walk," Sanders said in Thursday night's debate.

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CORRECTION: EPA to Begin Review of the Jacobsville Superfund Site

Evansville, Indiana

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The five-year review is an opportunity for you to tell the EPA about site conditions and any concerns you have. Contact:

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